

ALUMINUM STATISTICS
By David A. Buckingham and Patricia A. Plunkert
[All values are in metric tons (t) aluminum unless otherwise noted]
Last modification: August 13, 2004

Year	Reported primary production	Reported secondary production old	Reported secondary production new	Reported secondary production	Reported shipments	Reported imports	Reported exports	Reported industry stocks	Reported LME stocks	Reported government stocks	Estimated total stocks	Estimated apparent consumption	Estimated unit value (\$/t)	Estimated unit value (98\$/t)	Reported world production	Reported employment	Estimated net import reliance (%)
1900	2,296											2,300	721	14,000	6,800		
1901	2,603											2,600	728	14,000	6,800		
1902	2,615											2,620	728	14,000	7,900		
1903	3,010											3,010	728	13,000	8,500		
1904	3,674											3,670	772	14,000	10,000		
1905	4,903											4,900	772	14,000	13,000		
1906	6,407											6,410	789	14,000	17,000		
1907	7,405											7,410	992	17,000	22,000		
1908	4,844											4,840	633	12,000	17,000		
1909	13,190											13,200	485	8,800	30,000		
1910	16,060											16,100	492	8,600	45,000		
1911	17,420					1,890						19,300	443	7,800	46,000		
1912	18,960					10,300						29,300	485	8,200	58,000		
1913	21,450		4,220	4,220		10,500						32,000	520	8,550	65,000		
1914	26,300		4,100	4,100		7,370						33,700	410	6,660	69,000		
1915	41,050		7,710	7,710		3,870						44,900	750	12,000	78,000		
1916	52,210		17,500	17,500		3,020						55,200	1,340	20,000	106,000		
1917	58,900		14,600	14,600		27	4,550					54,400	1,140	14,500	123,000		
1918	56,580		13,700	13,700		816	10,900					46,400	739	8,000	128,000		
1919	58,280		17,000	17,000		6,280	2,280					62,300	708	6,680	121,000		
1920	62,610		14,100	14,100		17,800	4,270					76,200	721	5,860	125,000		
1921	24,740		8,070	8,070		14,800	996					38,500	487	4,430	70,000		
1922	33,400		14,800	14,800		19,900	2,130					51,200	412	4,000	87,000		
1923	58,360		19,300	19,300		19,300	2,510					75,100	560	5,330	141,000		
1924	68,300		24,500	24,500		14,400	2,880					79,800	595	5,670	168,000		
1925	63,560		39,900	39,900		19,100	5,730					76,900	595	5,510	178,000		
1926	65,000		40,100	40,100		32,400	3,460					93,900	595	5,460	195,000		
1927	73,000		41,900	41,900		28,400	6,590					94,800	560	5,230	220,000		
1928	95,000		43,400	43,400		17,600	7,130					105,000	536	5,100	258,000		
1929	102,000		43,900	43,900		23,100	7,730					117,000	536	5,100	280,000		
1930	103,900		35,000	35,000		11,500	7,860					108,000	525	5,150	272,000		
1931	81,000		27,500	27,500		6,730	2,130					85,600	514	5,500	220,000		
1932	47,000		21,800	21,800		3,710	2,010					48,700	514	6,130	153,000		
1933	38,610		30,400	30,400		6,920	2,590					42,900	514	6,470	142,000		
1934	33,650		42,100	42,100		8,430	3,800					38,300	516	6,290	170,000		
1935	54,110		46,600	46,600		9,660	1,800					62,000	441	5,240	259,000		
1936	102,000		46,700	46,700		11,600	728					113,000	452	5,320	360,000		
1937	132,800		56,800	56,800		20,500	2,440					151,000	439	4,980	482,000		
1938	130,100		35,200	35,200		8,050	5,720					132,000	441	5,100	579,000		
1939	149,000	34,300	14,700	48,900		13,000	33,600					163,000	441	5,180	720,000		
1940	187,100	41,600	31,300	72,900		16,400	25,300					220,000	412	4,790	787,000		
1941	280,400	39,100	57,800	96,900		12,200	6,770					325,000	364	4,030	1,040,000		
1942	472,700	37,800	140,000	178,000	619,000	102,000	35,200					577,000	331	3,310	1,400,000		
1943	834,600	30,000	255,000	285,000	892,000	123,000	107,000					881,000	331	3,120	1,950,000		
1944	704,000	20,800	275,000	295,000	976,000	91,600	171,000					646,000	331	3,060	1,690,000		
1945	449,100	24,800	246,000	271,000	845,000	303,000	5,350					772,000	331	3,010	870,000		
1946	371,900	82,100	170,000	252,000	740,000	38,700	15,100					478,000	331	2,760	790,000		

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1947	518,900	149,000	164,000	313,000	862,000	28,400	57,300					639,000	331	2,420	1,080,000		
1948	565,200	86,800	173,000	260,000	985,000	146,000	44,900			0	0	753,000	346	2,340	1,270,000		
1949	547,000	40,500	124,000	164,000	713,000	114,000	33,700	327,000		15,000	342,000	667,000	375	2,570	1,310,000		
1950	651,900	69,000	152,000	221,000	1,090,000	232,000	20,900	363,000		41,000	404,000	871,000	390	2,640	1,490,000		
1951	759,300	70,000	196,000	266,000	1,120,000	147,000	13,600	399,000		91,000	490,000	876,000	419	2,640	1,800,000		
1952	850,000	64,000	212,000	276,000	1,210,000	137,000	9,980	435,000		77,000	512,000	1,020,000	428	2,630	2,060,000		
1953	1,136,000	72,000	263,000	335,000	1,470,000	326,000	13,600	454,000		218,000	672,000	1,360,000	461	2,810	2,470,000		
1954	1,325,000	60,000	224,000	284,000	1,360,000	221,000	45,400	508,000		738,000	1,250,000	987,000	481	2,920	2,810,000		
1955	1,421,000	91,000	285,000	376,000	1,810,000	217,000	30,800	544,000		936,000	1,480,000	1,460,000	522	3,180	3,140,000		
1956	1,523,000	88,000	300,000	388,000	1,840,000	240,000	61,700	581,000		950,000	1,530,000	1,740,000	529	3,170	3,370,000		
1957	1,495,000	89,000	315,000	404,000	1,720,000	234,000	57,200	680,000		1,150,000	1,830,000	1,460,000	560	3,240	3,370,000		
1958	1,421,000	73,000	249,000	322,000	1,580,000	266,000	74,400	689,000		1,570,000	2,260,000	1,260,000	547	3,090	3,510,000		
1959	1,773,000	94,000	313,000	407,000	2,170,000	274,000	149,000	689,000		1,630,000	2,320,000	1,930,000	545	3,040	4,060,000		
1960	1,827,000	86,000	311,000	397,000	1,870,000	178,000	348,000	780,000		1,690,000	2,470,000	1,590,000	573	3,150	4,490,000		
1961	1,727,000	142,000	299,000	441,000	2,110,000	231,000	216,000	898,000		1,740,000	2,640,000	1,720,000	562	3,050	4,700,000		
1962	1,921,000	152,000	377,000	529,000	2,430,000	342,000	235,000	989,000		1,780,000	2,770,000	2,050,000	527	2,830	5,060,000		
1963	2,098,000	144,000	449,000	593,000	2,680,000	423,000	265,000	1,110,000		1,780,000	2,890,000	2,280,000	498	2,650	5,320,000		
1964	2,316,000	147,000	494,000	641,000	2,990,000	411,000	317,000	1,270,000		1,730,000	3,000,000	2,240,000	522	2,750	5,940,000	17,000	
1965	2,498,000	186,000	566,000	752,000	3,440,000	562,000	286,000	1,420,000		1,700,000	3,110,000	2,850,000	540	2,780	6,310,000	18,600	
1966	2,693,000	170,000	635,000	805,000	3,830,000	616,000	299,000	1,460,000		1,400,000	2,860,000	3,430,000	540	2,710	6,880,000	19,900	
1967	2,966,000	159,000	638,000	797,000	3,760,000	489,000	332,000	1,600,000		1,340,000	2,950,000	3,200,000	551	2,690	7,570,000	21,700	
1968	2,953,000	164,000	740,000	904,000	4,230,000	719,000	318,000	1,690,000		1,290,000	2,980,000	3,480,000	564	2,650	8,020,000	21,900	
1969	3,441,000	181,000	862,000	1,040,000	4,460,000	506,000	522,000	1,720,000		1,170,000	2,880,000	3,710,000	600	2,670	8,970,000	24,700	
1970	3,607,000	179,000	728,000	907,000	4,060,000	425,000	555,000	1,990,000		1,140,000	3,130,000	3,400,000	633	2,660	9,650,000	25,300	E
1971	3,561,000	196,000	757,000	953,000	4,480,000	626,000	266,000	2,280,000		1,140,000	3,420,000	3,830,000	639	2,570	10,300,000	23,500	2
1972	3,739,000	227,000	795,000	1,020,000	5,210,000	720,000	298,000	2,210,000		1,140,000	3,340,000	4,470,000	551	2,150	11,000,000	22,500	11
1973	4,109,000	240,000	886,000	1,130,000	6,240,000	557,000	509,000	1,980,000		475,000	2,460,000	5,280,000	582	2,130	12,100,000	24,400	18
1974	4,448,000	276,000	887,000	1,160,000	5,810,000	571,000	475,000	2,340,000		12,000	2,350,000	4,920,000	950	3,140	13,200,000	28,100	4
1975	3,519,000	305,000	816,000	1,120,000	4,140,000	499,000	399,000	2,720,000		10,000	2,730,000	3,540,000	767	2,320	12,100,000	23,200	E
1976	3,856,000	371,000	963,000	1,330,000	5,260,000	679,000	439,000	2,590,000		2,000	2,590,000	4,610,000	908	2,600	12,600,000	24,800	9
1977	4,118,000	482,000	974,000	1,460,000	5,570,000	758,000	373,000	2,590,000		2,000	2,590,000	4,980,000	1,050	2,820	13,800,000	26,400	7
1978	4,358,000	522,000	996,000	1,520,000	6,200,000	980,000	472,000	2,490,000		2,000	2,490,000	5,480,000	1,120	2,800	14,100,000	28,600	11
1979	4,557,000	557,000	1,060,000	1,610,000	6,210,000	762,000	701,000	2,330,000		2,000	2,330,000	5,340,000	1,560	3,500	14,600,000	29,600	4
1980	4,654,000	617,000	960,000	1,580,000	5,410,000	647,000	1,350,000	2,300,000		2,000	2,300,000	4,590,000	1,680	3,320	15,400,000	27,200	E
1981	4,489,000	758,000	1,030,000	1,790,000	5,500,000	848,000	787,000	3,000,000		2,000	3,000,000	4,620,000	1,320	2,370	15,100,000	28,100	E
1982	3,274,000	782,000	884,000	1,670,000	4,910,000	878,000	748,000	2,800,000		2,000	2,800,000	4,380,000	1,030	1,740	13,400,000	21,400	7
1983	3,353,000	820,000	953,000	1,770,000	5,850,000	1,090,000	776,000	2,260,000		2,000	2,270,000	5,030,000	1,510	2,470	13,900,000	19,300	17
1984	4,099,000	825,000	935,000	1,760,000	6,350,000	1,480,000	734,000	2,690,000		2,000	2,690,000	5,240,000	1,350	2,120	15,700,000	21,400	7
1985	3,500,000	850,000	912,000	1,760,000	6,380,000	1,420,000	908,000	2,340,000		2,000	2,350,000	5,210,000	1,080	1,640	15,400,000	18,600	16
1986	3,037,000	784,000	989,000	1,770,000	6,520,000	1,970,000	753,000	2,240,000		2,000	2,240,000	5,140,000	1,230	1,830	15,400,000	13,900	26
1987	3,343,000	852,000	1,130,000	1,990,000	6,870,000	1,850,000	917,000	1,890,000		2,000	1,900,000	5,470,000	1,590	2,280	16,500,000	15,700	23
1988	3,944,000	1,050,000	1,080,000	2,120,000	6,840,000	1,620,000	1,250,000	1,880,000		2,000	1,890,000	5,370,000	2,430	3,350	18,500,000	19,400	7
1989	4,030,000	1,010,000	1,040,000	2,050,000	6,760,000	1,470,000	1,620,000	1,820,000		2,000	1,820,000	4,960,000	1,940	2,550	19,000,000	19,900	E
1990	4,048,000	1,360,000	1,030,000	2,390,000	6,640,000	1,510,000	1,660,000	1,820,000		2,000	1,820,000	5,260,000	1,630	2,030	19,300,000	19,500	E
1991	4,121,000	1,320,000	969,000	2,290,000	6,350,000	1,490,000	1,760,000	1,780,000	168,000	2,000	1,950,000	5,040,000	1,310	1,570	19,700,000	19,900	E
1992	4,042,000	1,610,000	1,140,000	2,760,000	6,850,000	1,730,000	1,450,000	1,880,000	224,000	57,000	2,160,000	5,720,000	1,270	1,480	19,500,000	19,800	1
1993	3,695,000	1,630,000	1,310,000	2,940,000	7,330,000	2,550,000	1,210,000	1,980,000	169,000	57,000	2,210,000	6,610,000	1,180	1,330	19,800,000	18,800	19

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1994	3,299,000	1,500,000	1,580,000	3,090,000	8,170,000	3,380,000	1,370,000	2,070,000	18,000	57,000	2,150,000	6,880,000	1,570	1,730	19,200,000	17,800	30
1995	3,375,000	1,510,000	1,680,000	3,190,000	8,260,000	2,980,000	1,610,000	2,000,000	45,000	57,000	2,100,000	6,300,000	1,890	2,020	19,700,000	17,800	23
1996	3,577,000	1,570,000	1,730,000	3,310,000	8,330,000	2,810,000	1,500,000	1,860,000	33,000	57,000	1,950,000	6,610,000	1,570	1,630	20,800,000	18,200	22
1997	3,603,000	1,530,000	2,020,000	3,550,000	8,880,000	3,080,000	1,570,000	1,860,000	8,000	380	1,870,000	6,720,000	1,700	1,730	21,700,000	18,000	23
1998	3,713,000	1,500,000	1,950,000	3,440,000	9,260,000	3,550,000	1,590,000	1,930,000	13,000	0	1,940,000	7,090,000	1,440	1,440	22,600,000	18,400	27
1999	3,779,000	1,570,000	2,120,000	3,700,000	9,840,000	4,000,000	1,640,000	1,870,000	14,000	0	1,880,000	7,770,000	1,450	1,420	23,600,000	17,900	31
2000	3,668,000	1,370,000	2,080,000	3,450,000	9,830,000	3,910,000	1,760,000	1,550,000	125	0	1,550,000	7,530,000	1,640	1,550	24,300,000	17,100	33
2001	2,637,000	1,210,000	1,760,000	2,970,000	9,310,000	3,740,000	1,590,000	1,300,000	28,000	0	1,330,000	6,230,000	1,520	1,400	24,300,000	15,100	38
2002	2,707,000	1,170,000	1,750,000	2,930,000	9,640,000	4,060,000	1,590,000	1,320,000	45,000	0	1,370,000	6,320,000	1,430	1,300	26,000,000	13,700	39

Aluminum Worksheet Notes

Data Sources

Sources of data for the aluminum worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB) and its predecessor, Mineral Resources of the United States (MR); and Mineral Commodity Summaries (MCS) and its predecessor, Commodity Data Summaries (CDS). The years of publication and corresponding years of data coverage are listed in the References section below. Other data sources include the Materials Survey—ALUMINUM, compiled for the Office of Defense Mobilization by the U.S. Department of Commerce, 1956, (MS–Al); Metal Prices in the United States through 1998 (MP98), compiled and published by the U.S. Geological Survey in 1999; U.S. Bureau of Labor Statistics; the London Metal Exchange (LME); and the Aluminum Association, Inc. The “E” indicates that the United States was a net exporter of aluminum for that year. Blank cells in the worksheet indicate that data are not available.

Reported Primary Production

Data are domestic primary aluminum production. Data are reported in the MR and MYB.

Reported Secondary Production Old Scrap

Domestic metal recovered from post-consumer aluminum scrap. Data are reported in the MR and MYB. Production data are not available for years 1900–38.

Reported Secondary Production New Scrap

Domestic metal recovered from fabrication aluminum scrap. Data are reported in the MR and MYB. Production data are not available for years 1900–12.

Reported Secondary Production

Total domestic metal recovered from old and new aluminum scrap. Data are reported in the MR and MYB. Production data are not available for years 1900–12.

Reported Shipments

Data are the net shipments to domestic aluminum markets. Data are from the Aluminum Association, Inc. Data are not available prior to 1941.

Reported Imports

Aluminum imports into the United States. Data are reported in two sources. Import data for years 1911–20 are reported in the MS–Al, and data for years 1921–2002 are reported in the MR and MYB. Data for years 1900–10 are not available.

Reported Exports

Aluminum exports from the United States. Data are reported in two sources. Export data for years 1917–20 are reported in the MS–Al, and data for years 1921–2002 are reported in the MR and MYB. Data for years 1900–16 are not available.

Reported Industry Stocks

Industry stocks data as of end of year (December 31). Data are reported in the MR and MYB. Stock data for years 1900–48 are not available.

Reported LME Stocks

London Metal Exchange (LME) stocks of primary aluminum and aluminum alloy ingots at the end of the year (December 31) in U.S. warehouses only. Data are from the LME. Data prior to 1991 are not available.

Reported Government Stocks

U.S. Government stocks as of end of year (December 31), of primary aluminum ingots held in the Defense National Stockpile. Data are reported in the MR and MYB. Data prior to 1949 are not available.

Estimated Total Stocks

Total aluminum stocks of the United States, includes industry, LME, and Defense National Stockpile stocks as of end of year (December 31). Data sources include the MR and the LME. Data prior to 1916 are not available.

Estimated Apparent Consumption

Estimated U.S. aluminum apparent consumption was calculated using the following equation:

$$\text{APPARENT CONSUMPTION} = \text{PRIMARY PRODUCTION} + \text{SECONDARY RECOVERY (OLD SCRAP)} + \text{IMPORTS} - \text{EXPORTS} \pm \text{ADJUSTMENTS FOR INVENTORY (STOCK) CHANGES.}$$

If data for a particular category were unavailable, the data were presumed to be zero in making the above calculation.

Estimated Unit Value (\$/t)

Unit value is defined as the value of 1 metric ton (t) of aluminum. It is calculated using the “Annual Average Primary Aluminum Price,” in U.S. dollars, as reported in the MP98 and the MYB.

Estimated Unit Value (98\$/t)

The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

Reported World Production

Data are defined as world primary aluminum production. Data are reported in the MR and MYB.

Reported Employment

Data are the number of production workers employed at domestic primary aluminum smelters. Data are from the U.S. Bureau of Labor Statistics.

Estimated Net Import Reliance

Data are defined by the following equation, as a percentage (%) of apparent consumption.

$$\text{IMPORTS} - \text{EXPORTS} \pm \text{ADJUSTMENTS FOR GOVERNMENT AND INDUSTRY STOCK CHANGES.}$$

Data are reported in the CDS and MCS. The “E” indicates that the United States was a net exporter of aluminum for that year.

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